

## CLAIMS

1. A cold spray apparatus comprising:

- 5 a gas controller for controlling gas supply amount of main gas and residual gas  
(gas that is not supplied as the main gas);  
a gas heater for heating the main gas supplied under the control of the gas  
controller;  
a powder feeder for receiving the residual gas under the control of the gas  
controller and supplying a coating powder together with the residual gas;  
10 a powder preheating device for preheating the coating powder supplied from the  
powder feeder;  
a mixing chamber for mixing the heated main gas with the preheated coating  
powder;  
a temperature controller for adjusting temperature by controlling the powder  
15 preheating device and the gas heater; and  
a nozzle for spraying the coating powder mixed in the mixing chamber.

2. The cold spray apparatus of claim 1, wherein the powder preheating device  
includes:

- 20 a housing;  
a heater mounted on the housing to perform resistance heating; and  
a powder transfer pipe formed within the housing in a screw shape in order for  
fluid communication between the powder feeder and the mixing chamber, the powder  
transfer pipe transferring the coating powder.

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3. The cold spray apparatus of claim 1, wherein the powder transfer pipe is made  
of stainless steel.